Allowable Ex Parte Briefing
ND-2019-29-E
Southeast Energy Efficiency Alliance

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Allowable Ex Parte Briefing ND-2019-29-E
Southeast Energy Efficiency Alliance (SEEA) - Request for an Allowable Ex Parte Briefing to Discuss General Information and Considerations Regarding Regulatory Electric Vehicle Policies

TRANSCRIPT OF ALLOWABLE PROCEEDINGS EX PARTE BRIEFING

HEARING BEFORE: Chairman Comer H. "Randy" Randall; Commissioner John E. "Butch" Howard; Commissioner Thomas J. "Tom" Ervin; Commissioner G. O'Neal Hamilton; Commissioner Swain E. Whitfield; and Commissioner Florence P. Belser

ADVISOR TO COMMISSION: Joseph Melchers, General Counsel

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Andrew M. Bateman, Esq., representing the South Carolina Office of Regulatory Staff

COURT REPORTER: Kathleen R. Tackett, CVR-M

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Please note the following inclusions/attachments to the record:

PowerPoint Presentation Slides (PDF) re: "Presentation on Electric Transportation Trends and Opportunities."

PROCEEDINGS

CHAIRMAN RANDALL: Good afternoon, everyone, and welcome. I'm going to ask for this allowable ex parte -- I want to ask Mr. Melchers to read the docket.

MR. MELCHERS: Thank you, Mr. Chairman and Commissioners. We are here pursuant to a notice of request for Allowable Ex Parte Briefing. The party requesting the briefing is Southeast Energy Efficiency Alliance. We are here at the appointed time, as requested -- November 7th, 2 p.m. -- here in the Commission's hearing room.

Mr. Chairman, the subject matter to be discussed at today's briefing is: "General Information and Considerations Regarding Regulatory Electric Vehicle Policies."

Thank you, Mr. Chairman.

CHAIRMAN RANDALL: Great. Ms. Blair, welcome. I know before we start, we got to go to Mr. Bateman.

MR. BATEMAN: Good afternoon, Mr. Chairman, members of the Commission. My name is Andrew Bateman. I'm an attorney for the South Carolina Office of Regulatory Staff, and I'm

here as the designee for the executive director of the Office of Regulatory Staff at this Allowable Ex Parte being presented by Southeast Energy Efficiency Alliance. As the ORS representative, it's my duty to certify the record of this proceeding to the Chief Clerk of the PSC within 72 hours that this briefing was conducted in compliance with the provisions of South Carolina Code Annotated, Section 58-3-260, subsection "C". It is the ORS representative's responsibility and statutory duty in these proceedings to attend the briefing and file a written certification that such briefing was conducted in compliance with the provisions of that statute. It is up to the presenters, Commission, Commission staff, and all attendees to ensure that the actions here today follow the provisions of 58-3-260. That is the purpose of the statement that you need to sign and return to the desk in the back of the room when you leave today.

The requirements of that code section are, in part, that the Allowable Ex Parte be confined to the subject matter which has been

noticed. By limiting discussion to the subject matter noticed, the statute creates a narrow exception: the general prohibition against ex parte communications. In this case, the issue noticed is "General Information and Consideration Regarding Regulatory Electric Vehicle Policies." I, therefore, ask that everyone here please refrain from discussing any matters not related to that subject.

Second, the statute prohibits any participants, Commissioners, or Commission staff from requesting or giving any commitment, predetermination, or prediction regarding any action by any Commissioner as to any ultimate or penultimate issue which either is or is likely to come before the Commission.

Third, I'd ask that the participants, Commissioners, and staff refrain from referencing any reports, articles, statutes, or documents of any kind that are not included in today's presentation to prevent the need for myself or the folks from Southeast Energy Efficiency Alliance from having to try to and track down copies or links to these documents

to include in the record. As known, the information contained in the presentation appears to have been marked or requested to be granted confidentiality, I'd ask that the presenters refrain from referencing or discussing any materials over which they'd like to maintain confidentiality. And I'd ask the Commissioners, please be understanding if the presenters decline to provide such information to Commissioner questions here today.

Finally, if I've counted my days correctly, material corresponding to today's proceeding will be posted on the Commission's website by the end of the day next Thursday. Any document referenced or utilized today should be included in that posting.

Again, please make sure to read, sign, and return the certification form which you were given at the door when you came in today. Everyone needs to read the form, and if necessary, make any appropriate comments before signing and returning. This form needs to be signed by each attendee to certify that the requirements contained in South Carolina

Code Annotated Section 58-3-260, subsection "C" have been complied with at the presentation here today.

Thank you very much, Mr. Chairman.

CHAIRMAN RANDALL: Thank you. Okay. Ms. Blair, we're glad to have you here today and looking forward to your presentation.

MS. BLAIR: Thank you very --

CHAIRMAN RANDALL: Let me get you to -- yeah, get that red light on so we can all -- everybody can hear you.

MS. BLAIR: Thank you, Commissioner Randall, and all of -- of the Commissioners. I appreciate the opportunity to share with you information about electric transportation, policies and trends and opportunities. As was mentioned by Mr. Bateman, this information is general information, and I will seek to -- to keep it in that manner.

So just to get started, the Southeast Energy Efficiency Alliance, we are a regional, non-profit organization. We work in 11 states throughout the Southeast. We work to promote energy efficiency and energy-efficient transportation and are headquartered in

Atlanta, Georgia. We work on a number of programs: the program that I direct is the Energy Efficient Transportation Program; as well as on general energy efficiency policy; built environment, which is things like energy codes as well as financial opportunities for energy efficiency programs. Our electric transportation goals are to serve as a resource for stakeholders on energy efficient transportation programs and information; to support state policymakers, state agencies, and utilities' NEET information; and to help cultivate state-based leaders in this subject matter as well as supporting increased consumer awareness about electric transportation.

So to get started, want to just provide some background of what we're talking about in terms of electric vehicles. One of the questions I often get is, you know, "Is it a golf cart or a Tesla?" Well, there's a whole lot of other vehicles that are now available for people, and I want to go through and share just some information about that. So when I'm talking about EVs or electric vehicles, I'm

talking about primarily all electric -- battery electric vehicles. But it may also, at sometimes, include battery -- I mean, plug-in hybrid vehicles in which a portion of it is battery powered, but then it can switch over to gasoline or a diesel. There are increasing number of electric vehicles available to consumers as well as fleets, so both light and heavy-duty vehicles. In 2011 there were just around six models available in the Southeast region. Now there's more than 50 models that consumers can get. And we expect that to increase to somewhere around 250 in the next few years. According to a 2019 survey by the "Consumer Reports" that they did just recently, 63 percent of prospective car-buyers are considering electric models. And just graphically, to show where we are in terms of model offerings, you'll see where we were in -- in -- in 2008 that I referenced earlier increasing through 2018 with more than 50 models.

Here is just a snapshot of some of the heavy-duty electric vehicle options. And this is going to be a really important opportunity

for utilities in terms of depot charging, large-scale charging, infrastructure opportunities. Proterra is located here in South Carolina. They're making electric buses and have numerous orders nationally, internationally for those vehicles. Other bus companies include New Flyer, BYD, Blue Bird, and others. We're excited to see that Freightliner has introduced an electric long-haul truck, and we are expecting other manufacturers to come out with more of those. We're seeing more shuttle buses around airports in particular that are powered solely by electric. And then also garbage trucks and other work vehicles that are being powered by electricity. And that provides benefits particularly to public health in -- in our communities.

All right. This is just a little bit of information to get you grounded on charging infrastructure and let -- you'll hear me refer to the different levels of charging. Level 1 and 2 is very -- Level 1 is your base slow charging. You can plug a vehicle just into a regular outlet, and typically, if you have a

Nissan Leaf, or you know, some car that has around 100 miles, you're going to need all night -- you know, more than 24 hours to get a full charge on that. So, often, people will install what's called a "Level 2 charger" in their home, or that's typically what you'll see in retail locations is Level 2 charging. And so that's the second level. And then DC fast charging is what we're going to see particularly in fleet applications. We're going to need along corridors to help people in their long-distance trips. That is much more expensive charging infrastructure, but really help people to reach longer destinations. So Level 1, Level 2, and then DC fast charging is primarily what I'm going to refer to.

All right. So where is the industry? We're now at over one million vehicle -- electric vehicles in the United States. We're seeing major charging companies, Greenlots and others, being acquired by oil companies, like Shell and BP. As I mentioned earlier, more electric vehicle models are being introduced. Manufacturers are making long-term commitments

to switch to electric platforms. All major manufacturers have made a commitment to go partially or all electric in the next five or ten years. And we've seen over a billion dollars in investments from utilities in EV charging, whether that's infrastructure, education programs, rebates, changes to their rate designs to support electric vehicles, a range of policies. And we're also seeing major medium and heavy-duty vehicle models announced and also major fleet commitments to electrification. Major companies like Walmart and others have made a commitment to go a hundred percent electric. And to supply those vehicles, we're going to need to have strong utility involvement in setting up that charging infrastructure.

This is a graph to showing the general trend of electric vehicle adoption and growth. You'll see how that's accelerated since 2011, and on the very right-hand side, you'll -- you'll see those big yellow bars. That -- those are the Tesla Model 3s, which is Tesla's newest model that they've made available that has longer range. It's a lower-priced. And

what is it that's showing is that there's greater demand for lower cost, longer-range electric vehicles. And that's what we're going to need -- more trucks, more vehicle options -- in the future. The line that's at the top, those are the gas prices.

All right. This is just demonstrating the increased trend of a charging infrastructure deployment as well. This includes both utility and private industry deployments.

We're also seeing an increase in the range of vehicles being offered, from a median of just 73 miles on a single charge to longer range today. And that is increasing with every new model that's coming out. The thing to note here, however, is there's been numerous studies that show that more than 70 percent of drivers today drive fewer than 30 miles a day. And so even the EVs that are available now could work for most people's needs. But this really is a cultural shift, and so folks are going to need to get used to and have that confidence of the longer-range EVs. And we're going to see that change, I

think, quite a bit over the next few years.

All right. From a Southeast perceptive, you'll see here Florida is the -- the state with the largest number of electric vehicles, followed by Georgia. And then you'll -- you'll see, on down, Virginia, North Carolina, Tennessee, South Carolina, Alabama, and Mississippi. What's notable with -- between Florida and Georgia, Florida's growth is primarily due to the, you know, size of the state and things like that. Georgia's growth is -- was primarily from a generous tax credit that was available between 2011 and 2015. That really drove interest in electric-vehicle adoption. It applied both to the lease of vehicles as well as the sale.

Charging infrastructure tracks directly to the number of electric vehicles. As you'll see, the largest number of charging stations is in Florida, followed by Georgia, and this, again, is a mix between private and utility installations.

All right. Want to give you just a general vision of the cars today and how far they can go. If you'll see, there in the

center is Columbia, and most of the -- these are the top five plus the Chevy Bolt added in here. You'll see that all of the vehicles can travel to many of the states in our region. Of course, you'll need charging infrastructure to support those wherever you're going in there, so we've mapped some of the DC fast charging. Now, these icons are really large, so it looks like there's a lot of charging and that would really meet everybody's needs. But, in fact, there's a lot of space in between these. But I think there's a couple of things I want you, you know, to understand from this and that is the cars today can travel a lot farther than a lot of people assume. There is a lot of infrastructure that is available, but we do need more.

All right. This is a guide. Plug In America has put together a list of principles to -- to think about when considering charging infrastructure deployment because it really needs to work for consumers. There needs to be a robust charging network to build consumer confidence. I mean, that's both for fleets as well as individual consumers. People need the

ability to charge at their place of dwelling. Electricity rates need to encourage the adoption of EVs. Currently, for example, Georgia has -- Georgia Power in particular has a time-of-use rate. It's one cent per kilowatt hour in the middle of the night and then 20 cents during the peak of the day. So that's one way that they're -- they're looking at driving, you know, when people charge their vehicles.

People need to have confidence and know they can find a station when they need it. So up-to-date maps and directional signage; needs to be consistent etiquette guidelines, a standard payment method. Currently, there's many different forms of payment not just credit cards. You have individual company cards. So we think that it's important to standardize that process. Stations should abide by interoperability billing standards and knowing the total cost of what people are paying when they're charging the vehicle. And knowing what the charging rate is -- the kilowatts at the station -- as well as knowing the operational status at the station. Is

that station, even though I see it on a map, is it actually available for me to use? So keep these, you know, in mind as considering charging infrastructure deployment.

From a forecast perspective, we are expecting to see electric vehicles continue to grow both on light and heavy-duty side.

All right. So overview of some of the policy trends that we're seeing across the country. And I've highlighted, in particular, those policies that have been adopted in the southeast region. Charging incentives: Those are programs like rebates being offered to residential customers to put a Level 2 charging station in their home. Just as an example, one utility in the region provides a $250 rebate to -- for a Level 2 charging station, and they will provide that once it is installed at the home. But the customer does have the ability to have it installed by someone of their choice. Those are also available in some cases to businesses usually at a higher -- higher rebate amount.

As I mentioned just a moment ago, EV charging rates are another thing to consider.

Virginia, North Carolina, and Georgia all have charging rates specific to electric vehicles. State fleet incentives: Some states, Virginia, for example, provides low interest loans for fleets to acquire electric vehicles. There are also state vehicle incentives. Georgia was probably the most well known, and it -- but it was a very generous tax credit. It drove a lot of usage. It was $5,000 for a lease or purchase of an electric vehicle, but that was repealed in 2015 because there were no constraints put on it. No sunset and -- and so that was, in fact, repealed. Ones that are currently notable: California has vehicle incentives, to date is the next most popular that you might hear about.

Also the ZEV adoption. That's the Zero Emission Vehicle standards. There are many states that adopted these standards, setting goals for the number of vehicles that the state wants to see by a certain date. And one of the things that this help does is gives manufacturers certainty and provide more options to consumers in those states. For example, you can get a whole lot more vehicles

in a state -- vehicle options in a state that has adopted the ZEV standard versus those that have not. So there is a limited availability of models for most of the southeastern states.

There's also a growing trend of charging infrastructure planning and deployment plans. So many states are developing statewide plans. North Carolina recently completed their zero-emissions vehicle plan. Tennessee has developed a Drive Electric Tennessee plan. And Florida is in the process of developing a plan. And this helps align both private industry as well as utilities in the charging infrastructure planning process.

And then a -- a critical piece of all of this is consumer awareness about the types of vehicles, access to charging, you know. This is a -- a different way of travel. And there will be some cultural shifts in this -- in this new industry and new economic opportunity for the state. But there needs to be a lot more consumer awareness about the availability and the options.

So I want to highlight some of the utility -- other utility filings around the

country. This is a growing trend. As you'll see here, some of the first filings began in around 2012, and this has been increasing over the past several years. Sixty-five filings have been approved. 1.2 billion dollars in programs among 41 utilities. And that equates to about 23 -- more than 2300 fast charging stations and more than 45,000 Level 2 charging stations. There's some 32 filed programs that have yet to be approved. They're in the process, and $1.5 billion investment that has been proposed. And then there's been other programs that have been denied or withdrawn or resubmitted in some manner, and that -- there's a number of factors that have affected that from uncertainty about what, you know, the specific role is of the utility or certain elements of the program have been pulled out and others have been included. Some of the examples, for example, Xcel Energy, the Commission required the utilities to file detailed plans. There's Commissions who are actually requiring the utilities to make plans for -- for charging infrastructure so to support consumers. As you know, there's also

Duke Energy filing here. There's one in North Carolina as well. There -- the -- in Michigan the Commission hosted technical conferences and workshops and set up independent dockets that would consider all the policy mechanisms that could be considered by the Commissions. In Maryland, the Commission opened a -- a specific docket to engage stakeholders in this process and considered and approved specific programs.

The components that have been a part of all these filings have included everything from, as you'll see here, EVSE. That's referring to charging stations. Those programs include some that are the utility provides the support up to the point of the charging station, and in some cases, it includes that they are actually owning and operating the stations. Also includes EV rates, which I've already mentioned a couple of times. Programs have -- also include utility education and outreach. Many of them, for example, are doing direct outreach, like ride and drive events where people can see cars. They're educated on what a charging

station is, or they have a website where people can go on, put in how much they drive on a daily basis, and it will provide suggestions of what cars that are currently on the market that would be available to them today. It also includes evaluation and administration. This can include data management and tracking to figure out, you know, what the load opportunity and subsequent kind of backup power opportunities there could be from the transportation sector in the future. And then also includes EV incentives. I also mentioned that earlier. That includes things like our charging station rebates.

We believe that utility programs are critically valuable to our states in terms of reliability, dependability of charging infrastructure. We also think there's space for private industry and utility engagement and owner in operations of vehicle charging.

There's been some reports that have shown that, as EV adoption increases, there will be downward pressure on rates overall. It's opportunity for peak shaving as well as grid resilience, utilizing vehicles for backup

power. And it serves ratepayers and non-ratepayers in terms of the clean-air benefits and others in communities with high emissions. And also an opportunity to connect more energy services.

We believe we -- you need multiple parties, both private industry as well as utility investment in these programs to meet the charging needs that we're -- that will be required to meet EV growth into the future. And we think utilities should get prepared now and invest in that and figure out what the role is that they really want to have in this process. They can build at scale, compared to private industry, and will have reduced installation costs and they have low -- they have access to low-cost capital and existing expertise in installation and maintenance.

Drivers really need dependable, reliable charging stations. Utilities can better help plan and integrate load and minimize grid impacts, and as more fleets adopt electric vehicles, this is going to be really important for the utility to be able to anticipate what that load is and what their opportunities to

manage that are.

And it offers the ability to meet the needs of all customers, providing charging stations in locations where there may not be high utilization, but it builds consumer confidence in their travel needs.

Utilities are also in a good place for grid monitoring and distribution planning, based on the increasing adoption of vehicles, both light and heavy-duty.

That is my summary today, and I'm happy to entertain any questions. Thank you.

CHAIRMAN RANDALL: Thank you, ma'am. Commissioners, questions? Commissioner Ervin.

COMMISSIONER ERVIN: Thank you, Mr. Chairman.

EXAMINATION

BY COMMISSIONER ERVIN:

Q Ms. Blair, thank you for coming today. It's been an informative presentation. You mentioned the North Carolina docket, and I'm wondering, did you attend the -- I think they called it a -- a "seminar" or "planning session" that was held by the North Carolina Commission regarding EVs?

A I did not.

Q One of the questions that the North Carolina

Commission had at that meeting, I'm told, is that the -- the staff -- the Public Staff questioned whether or not an investor-owned utility should have an ownership interest in the charging stations or whether it would be more advantageous for private industry groups to pursue that. And so there seems to be a little, I won't say "tension," but interest in terms of how best to -- to proceed.

What's your recommendation in that regard?

A I believe that we need both. And to meet the forecasts for electric vehicle adoption, we're going to have to have both. I think there's space for all. I do think that it will be really valuable to have utilities directly involved in some of that.

Now they -- I -- I do think that doing it on a pilot basis is helpful. The industry has changed a lot since some of the initial pilots, and so there -- we need -- there's more to figure out on how the industry's changed, where current EV ownership is in each of -- each of the states, and how to maximize the opportunities.

I think it's important for utilities to really figure out what they want their role to be. And it may be up to the point of charging stations. It

may be owning and operating. I have found, personally, that many of the charging stations that have a joint partnership between private companies and the utility are the most reliable stations. And as a driver of an electric vehicle, that's really important to me.

So there needs to be a strong partnership in that and -- and accountability, and I believe, because there is oversight of those, their role is really important. But I think there's -- there is a role for private industry, absolutely.

Q And, so, one thought that I've had about all that is -- is the technology is -- as it advances, does it make sense to leap in now and require utilities to -- to install these charging stations, or would it be best to take a wait-and-see approach and, for example, I don't know if you subscribe to or -- or view www.eenews.net. Are you familiar with that website?

A Uh-huh. Yes. Yes.

Q I'm told there was an article in -- on the website this week that said a -- a Penn State engineer has now found a way to manufacture a ten-minute EV charging station, which would be a game changer, obviously.

A Right.
Q If you could put in a charging station at a filling station or a -- a fast-food store, and you could -- you could plug in and get -- get fully charged in ten minutes, that -- that would clearly be a game changer. But the question is, how soon could this kind of technology become widespread in terms of, you know, building it to scale?
A Right. I think that's a really exciting technology. It is -- it is very expensive, and I think it's important to -- I think we need a base-level of infrastructure that utilities and private industry are getting out. And it needs to have flexibility in the system to -- to do some of the upgrades. I mean, just like, you know, our cell phones and things like this. I mean, this is an industry where there's going to constantly be innovation.

But it doesn't mean we don't start now. We need -- we need to start now and do that. There's a -- you know, other elements, too, that -- the fast charging. I mean, we need fast -- you know, we need that rapid charging, definitely. But most people are charging at home and will continue to do that. We -- more studies also need to be done on

the impact to the batteries of the -- you know, doing a lot of fast -- fast charging and things like that, as well.

But, just to -- to summarize: We need a base level of charging. We need to start now. Utilities need to be -- be prepared for that and to plan for it. And I think we need to continue on that path and -- and not wait.

Q Okay. And so I -- I agree with you on that point, but has anyone proposed national standards on how to -- to do that so that if you go ahead now and install a system and connect it to the grid, and then three to four/five years down the road, the technology's changed and improved, anybody working on -- on standards -- industry standards on how to best accommodate the changes going forward?

A I know different groups are looking at those opportunities. As -- as far as I know, nothing is very far; but I know groups like the Alliance for Transportation Electrification and others who work nationally, are looking at some of those things. Of course, some of the early test bed is, of course, in California, where they're, you know, testing and a lot of this, and -- but there's nothing to date. But I -- I do know it's something

people are thinking about.

COMMISSIONER ERVIN: Thank you.

MS. BLAIR: Uh-huh.

CHAIRMAN RANDALL: Thank you. Commissioners, other questions? Commissioner Whitfield.

COMMISSIONER WHITFIELD: Thank you, Mr. Chairman.

EXAMINATION

BY COMMISSIONER WHITFIELD:

Q Thank you for being with us today. I -- I just have one quick question about your Slide 7, where you had a -- a slide on heavy-duty electric transportation.

A Yes.

Q I just wanted to ask you: I know from what I've heard, you know, seen in the past that one of the obstacles was that electric vehicles didn't quite produce the torque or the horsepower for these heavy-duty vehicles and you cite everything in here from buses to long-haul trucks, delivery trucks and -- and, you know, medium-sized trucks, too, and medium-sized equipment. Could you, maybe, touch on that: What the advances have been there or where that stands as far as torque and horsepower production for -- for vehicles like that?

A Yeah. I don't have too much information on that, but I could certainly follow up with additional details. But what I know in terms of electric vehicle technology: Torque is not the problem. Electric vehicles have much more torque than many -- many gasoline or diesel vehicles. I think there is a question, you know, on the, you know, payload and the power --

Q Right.

A -- to carry different loads. And there -- there is a lot of research going into that, but I could follow up with -- with more. I don't have specific details that I can recall to -- to share with you.

Q Yeah. It just looks like on your slide that -- particularly, I think, you cite garbage trucks. They have, of course, a shorter range of mileage and require, you know, their charge won't hold as long, I guess, when you're -- you know, you're saying they have the power and the torque, but at the same token, you know, it's probably zapping energy a lot --

A The -- the range --

Q -- quicker.

A -- is an issue and there are a lot of tests, particularly with transit buses and things like

that going on right now, you know. As -- as one example, Asheville, North Carolina, seeing how it -- how they do on mountain roads and things like that, and how that does affect the batteries. There are a lot of tests in pilots --

Q Uh-huh.

A -- pilot programs on those to evaluate and then share that information.

Q Well, it certainly -- you know, it certainly is a concern. You don't want those type vehicles to get in a situation where they can't go. It could --

A Right.

Q -- really, really create a -- a hazard.

A Right. Oh, absolutely.

COMMISSIONER WHITFIELD: Well, thank you.

MS. BLAIR: Thank you.

CHAIRMAN RANDALL: Commissioners, any other questions?

COMMISSIONER HAMILTON: Mr. Chairman.

CHAIRMAN RANDALL: Yes, sir.

COMMISSIONER HAMILTON: I have one.

CHAIRMAN RANDALL: Commissioner Hamilton.

EXAMINATION

BY COMMISSIONER HAMILTON:

Q I was just wondering, what would a commercial

charging station look like when most of it requires overnight charging, and as on a commercial basis, what -- how do you foresee that --

A So what --

Q -- how to fast charge?

A Yeah. Well, what's been shared with me in terms of these commercial charging and what we -- and one of the real benefits, for example, you know, school buses, is they sit most of the time. So, you know, charging overnight, they're not going to need that -- that fast charging. But the scale of some of these fleet operations is, essentially, as if a utility is building a new power plant. I mean, the scale of power that's going to be needed to serve some of these -- these fleets, that's going to be a lot of load for the utilities and a lot of charging stations, a lot of ports at those locations.

But it is going to vary, depending of what type of fleet it is. So the school buses and others, it's going to be something that's a slower charge likely. But for like the transit buses, they're going to need something quicker, because they're running all day long. And so it's going to vary depending on the application.

Q Okay. Like what I'm thinking about, if I'm on

vacation with my family, and we're on the interstate and I just can flip off and get gas.

A Uh-huh.

Q What am I going do with an electric vehicle a hundred and something miles away?

A Well, you -- you can do that today, and we want to see many of the gaps that do exist along major highway corridors -- we want to see more charging stations. And we -- we think private industry and utilities have a role in filling those critical gaps.

Q Okay. I'm still -- to get back to my first question. Now, I get off the interstate, what's the charging station going to look like? Is it just going to be one car that they can do, or tell me about that.

A It will -- it will vary, depending -- from one that might have two ports to that -- two stops, it'll have multiple charging stations with multiple "ports," is what we call them, the -- you know, the actual plugs. It will vary. There'll be some that will just have one; others that will have a whole bank. And that's what we're finding today. So, for example, you know, on our drive up here, if I was to pull off 20 at -- in Madison, just outside

Atlanta, there's a couple of stations where there's -- there's a DC fast charger that has two different ports, and then there's a Level 2 charging station, with two ports. So that's potentially four different, you know, cars that could be there.

But Electrify America has banks of ten to twelve charging stations, similar to Tesla. They -- they have, you know, ten/twelve different stations at their "depots" is what I call them, but yes.

COMMISSIONER HAMILTON: Thank you. Thank you very much.

MS. BLAIR: Uh-huh.

CHAIRMAN RANDALL: Thank you. Commissioners? Commissioner Howard.

EXAMINATION

BY COMMISSIONER HOWARD:

Q A couple of questions.

A Yes.

Q Are you or any of your -- are any of these projects the beneficiary of the Volkswagen settlement?

A There are a lot of Volkswagen settlement programs. I didn't reference any individual projects. But Volkswagen is a large opportunity. So, you know, there are the two pots of money, I referenced

earlier. They are Electrify America, which is one pot that's deploying -- deploying charging infrastructure, for example, long corridors. Then the -- the other pot, which the Department of Insurance is handling here in South Carolina, that is primarily -- will support transition of heavy-duty diesel vehicles to some other fuel, whether it be electric buses or, you know, it could be in another diesel vehicle or a natural gas vehicle. And, also, the charging infrastructure, for example, to support the electrics that are deployed.

So there are, you know, each of the states is deploying the VW settlement funds, based on how they finalize their plans. So, you know, South Carolina has a specific plan for how that's going to be rolled out. Florida's is somewhat different. Similarly to all the other states. Some of them are prioritizing that all the diesels that are taken off the road must be electric. Others are saying it could be any fuel type.

I can get you a list of some of the projects if you would like.

Q Fine. I -- I don't need it. I'm not on it, so I won't need it.

There was a conversation several years ago when we first started talking about EVs, about there could be -- only be so many charges, residential charges, within -- on a transformer. And after that, then the utility would have to replace the transformer at a cost of non-EV charger owners having to subsidize it. Is that still an issue, or what is that story?

A There will be a limit. So adding a Level 2 charging station at your home is basically adding something a little more than another air conditioner unit. And so there will be additional pressure on, you know, the transmission and distribution system. And, so, those upgrades will need to be made to support the vehicles.

And, you know, it is -- we believe that, ultimately, this transition is going to support all ratepayers and as the vehicle costs come down, there are more options. Already, the secondary market, you can get a Volt, a Bolt, a Leaf, for, you know, under $20,000. So that is growing, that more people will be able to take advantage of it. So it will benefit all ratepayers, in terms of, you know, clean air as well as access. And, so, yes --

Q As we --

A -- all of us will need to pay for it.
Q All of us have to pay for it?
A Yes.
Q Okay.
COMMISSIONER HOWARD: Thank you very much.
CHAIRMAN RANDALL: Thank you. Commissioners, anything else? I was going to say, we got to -- at NARUC last summer, we got -- we visited a -- a battery storage facility, but we rode there on a Proterra bus.
MS. BLAIR: Uh-huh.
CHAIRMAN RANDALL: And that they had shipped up there on top of a flatbed truck. But it was -- one of the things they told us about that was it was made out of some sort of composite materials. It was much lighter than a normal bus that made it -- the charge last longer and that kind of thing. So I -- I thought that was pretty interesting. But the same battery -- small batteries that were in drawers at the battery storage facility were what they were using to power --
MS. BLAIR: Uh-huh.
CHAIRMAN RANDALL: -- the electric bus. So I learned a little bit about that there. So

that was very interesting.
MS. BLAIR: Yeah. It's a new industry, new economic opportunity for the state. I'm, you know, excited Proterra's here. BMW's doing some of their electric manufacturing. There's a lot of new opportunities with the technology.
CHAIRMAN RANDALL: Proterra seems to be doing very well and getting a lot of contracts around all over the country.
MS. BLAIR: Right.
CHAIRMAN RANDALL: From right outside of Greenville, so. Any other questions, Commissioners?
Okay. If not, Ms. Blair, thank you so much for being here today. Very informative and we enjoyed your presentation very much.
MS. BLAIR: Thank you for the opportunity. I'm happy, you know, to do any follow up and provide additional information. Thank you.
CHAIRMAN RANDALL: Wonderful. Thank you. Okay. If there's nothing else to come before us, we are adjourned.
(WHEREUPON, at 2:48 p.m. the proceedings in the above-entitled

matter were adjourned.)

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STATE OF SOUTH CAROLINA)
)
COUNTY OF LEXINGTON)

CERTIFICATE

Be it known that Kathleen R. Tackett, CVR-M, took the foregoing proceeding and hereby attests:

that I was then and there a notary public in and for the State of South Carolina-at-large and that by virtue thereof I was duly authorized to administer an oath;

that the deponent/witness was first duly sworn to testify to the truth, the whole truth, and nothing but the truth, concerning the matter in the controversy aforesaid;

that the foregoing transcript represents a true, accurate, and complete transcription of the testimony so given at the time and place aforesaid to the best of my skill and ability;

that I am neither a relative nor an employee of any of the parties hereto, nor of any attorney or counsel employed by the parties hereto, nor interested in the outcome of this action;

that, if a recording of an event was supplied by another party for purposes of transcription and I was not present during that event, the foregoing pages were transcribed to the best of my skill and ability; additionally, any identifications of speakers were provided to me by the party supplying the recording;

that, in the event of a nonappearance by the witness, the foregoing details for the nonappearance are accurate.

In witness thereof, I have hereunto affixed my signature and title.

Kathleen R. Tackett, CVR-M

Date: 11/12/2019
Notary public for South Carolina
My commission expires July 19, 2020